DOCUMENT RESUME

ED 259 371 CS 209 127

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TITLE Commercial Complexity and Local and Global Involvement in Programs: Effects on Viewer Responses.
PUB DATE Aug 85
NOTE 31p.; Paper presented at the Annual Meeting of the Association for Education in Journalism and Mass Communication (68th, Memphis, TN, August 3-6, 1985). Small print may affect legibility.
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Advertising; Cognitive Processes; Higher Education; *Mass Media Effects; *Programing (Broadcast); *Retention (Psychology); *Television Commercials; *Television Research; *Television Viewing
IDENTIFIERS *Audience Response; Brand Name Products

ABSTRACT

A study investigated the effects of local (momentary) and global (whole program) involvement in program context and the effects of message complexity on the retention of television commercials. Sixteen commercials, categorized as simple video/simple audio through complex video/complex audio were edited into two globally high- and two globally low-involving programs. Local involvement was varied within each of the four programs. Sixty-nine male and female undergraduate students viewed the programs and commercials and were asked to recall as many as possible of the commercials they had just seen. The subjects were then given a recognition test on which they indicated the product categories for which they had seen commercials and listed the brand names. Attitudes toward the commercials and television viewing behavior and demographics were also ascertained. The results indicated that recall and recognition of the commercials was lower for globally high-involving programs. Local involvement resulted in mixed memory effects. Audio eomplexity aided recalls and the effect was enhanced by the presence of video complexity. No attitude effects were found. (HTH)

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Commercial Complexity and Local and Global Involvement in Programs: Effects on Viewer Responses

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Abstract

This study examined the effects of viewers' global and momentary (local) involvement in television programs, and the audio and video complexity of commercials occurring in the programs, on memory and attitudes toward the commercials and advertised products. Sixteen commercials categorized as simple video-simple audio, complex video-simple audio, simple video-complex audio, complex video-complex-audio were edited into two globally high- and two globally low-involving programs. Local involvement was varied within each of the four programs. Recall and recognition of the commercials was lower for globally high-involving programs. Local involvement had mixed memory effects. Audio complexity aided recall and the effect was enhanced by the presence of video complexity. No attitude effects were found. The results are discussed in terms of how program involvement may affect viewer processing of commercials.

Commercial Complexity and Local and Global Involvement in Programs: Effects on Viewer Responses

In maximizing the effectiveness of television advertising expenditures, the effect that programming context may have on commercial performance is often overlooked. Particularly in spot purchases, there is little consideration for the programming content itself, even though this context is likely to influence the communication effectiveness of commercials.

Although media buyers largely ignore the effects of program environment on message processing, the idea that it makes a difference is not new. Over the years, numerous studies have analyzed the influence of program environment on embedded messages, and most of the findings, both from experimental and survey studies, indicate that commercials are indeed affected by their program environment (Bryant & Comisky, 1978; Cannon, 1982; Horn & McEwen, 1977; Kennedy, 1971; Krugman, 1983; Leach, 1981; Papazian, 1983; Priemer, 1983; Soldow & Principe, 1983; Yuspeh, 1977).

Much of the literature on the effects of programming involvement has been based on one or both of two assumptions about consumer processing. The first is that when viewers are involved in program content, they will spend more processing capacity organizing and rehearsing thoughts about the programming during intervening commercials. As a result, the commercial messages will be less thoroughly processed and more poorly recalled and recognized.

A second explanation for programming effects was articulated by Axelrod (1963). He argued that when viewers are involved with a program, they will experience a feeling of irritation when the program is interrupted, and it is the irritation itself that interferes with processing and hence remembering of commercial messages.

Before looking in detail at research that has tested these ideas, the concept of involvement with television programing must be examined. Four main operational definitions have appeared in the literature.

Defining Involvement

First is the degree to which programming is liked. Leach (1981) for example, had subjects rate program liking and correlated this measure with recall. He found that higher recall scores were associated with commercials that had appeared in better liked programs.

Second is the degree to which subjects are interested in story lines. Using this definition, Krugman (1983) hypothesized that interest in a program would have a positive influence on commercial effectiveness because the "momentum of aroused interest carries over [from the program to the commercial message]." To test the hypothesis, Krugman correlated the differences in viewers' pre-and post-viewing attitude scores toward the General Electric Company and rated interest in programs sponsored by GE institutional advertising. He found more positive change associated with more interesting programs.

Third is the degree to which programming is suspenseful. Kennedy (1971) theorized that viewers of suspenseful programs experience a greater desire for "closure," that is, having the viewing experience be a whole pattern. Similarly, Soldow and Principe (1981) measured involvement as subjects' rank-ordering of crime and adventure programs in terms of suspense. Both studies found lower recall of commercials embedded in more suspenseful programming.

Fourth is over-time measures of involvement, two of which were introduced by Bryant and Comisky (1978). They first measured involvement in terms of the frequency of errors subjects made in detecting a tone during viewing of programs (more errors indexed higher involvement.) The second measure was an indicator from subjects of how "absorbing" each minute of the program was. Again the

result was lower recall of commercials embedded in the most involving program segments.

As can be seen, many stimulus dimensions seem relevant to the notion of involvement with programming. To avoid taking too narrow an approach to operationalizing the concept, the present study departed from previous approaches and determined programming involvement by asking pretest subjects to rate for each program segment how involved they were with the program. This measure, while a simple one, was designed to allow subjects to decide for themselves what the involvement concept meant and thereby to include a number of different dimensions such as "suspenseful," "interesting," "liked," "challenging," and so on.

Local and Global Involvement

It seems obvious that programming will not create a constant level of involvement for the viewer. Indeed, commercial interruptions often seem designed to occur in programs at peaks of action, suspense, or interest. Only one study has examined both global (whole program) and local (momentary) involvement effects. Bryant and Comisky (1978) showed that memory for a commercial was best after the resolution of a story, less strong before either climax or resolution and least after climax and before resolution. They argued, then, that both global and local involvement levels affect memory.

Commercial Structure

While the idea that the structure of a commercial message will affect viewer memory and liking for it is not new (Leavitt, 1968; Percy & Rossiter, 1983; Rossiter & Percy, 1980), this variable has not received attention in the literature on program involvement. As an exploratory step, the present study therefore manipulated two structural variables that have been well-researched in the television effects literature: video and audio complexity. Video complexity was measured in terms of the occurrence of cuts, dissolves, zoom-ins and-outs, pans,

person and object movement and scene changes (Thorson, Reeves, & Schleuder, 1985; Watt & Welch 1983). Audio complexity was measured in terms of grammatical complexity and the number of ideas present per unit time (Britton, Westbook, & Holdredge, 1978; Kintsch, 1974; Kintsch & van Dijk, 1978).

Dependent Measures

There have been three categories of viewer response measured in the program involvement literature. The first is memory. Kennedy (1971) showed poorer recall of commercials in suspenseful programming than in a comedy. Soldow and Principe (1981) showed less recall of brand names and sales messages in a suspenseful show (Baretta) than in a family situation comedy (Brady Bunch). Finally, Bryant and Comisky (1978) showed poorer commercial recall during more "involving" segments of an action adventure program (Banacek).

A second measure has been attitudinal. Both Soldow and Principe (1978) and Kennedy (1971) failed to find programming context effects on liking for products or ads.

Finally, four studies have examined effects on purchase intent (Yuspeh, 1977; Kennedy, 1971; Bryant & Comisky, 1978; Soldow & Princie, 1981). Only Soldow and Principe (1981) found significant effects, and here again, higher involvement in programming had negative effects on the dependent measure.

Design Flaws in the Literature

As can be seen, significant questions remain to be asked about program context effects. In addition, however, to problems of defining program involvement, distinguishing local and global involvement effects, and lack of attention to the effects of commercial structure themselves, previous studies have suffered from two major design flaws. First, none of the studies have sampled instances of high-and low-involving programs. Rather, they have used unique, single instances of programs and attempted to generalize from them. This leaves

observed effects open to the possibility of having been produced by the programs themselves, rather than by involvement processes per se (Jackson & Jacobs, 1983).

Second, none of the studies have both sampled commercials and counterbalanced their order of presentation in the test programming. Without such a manipulation, results cannot be attributed to processes independent of the possibility that unique messages or unique message/order combinations are producing the effects.

The Present Study

The study reported here was designed to correct some of the deficiencies in previous research and to explore some new questions. Based on the literature cited above and on the two assumptions about how program context might affect commercials, eight hypotheses were formulated.

Hypotheses

The first three hypotheses concern the effects of global and local program involvement on memory for commercials.

Hypothesis 1

Subjects will have lower memory scores for commercials occurring in a globally high-involvement program than for commercials in a globally low-involvement program.

Hypothesis 2

Subjects will have lower memory scores for commercials that are placed in a locally high-involvement position in a program than for commercials placed in a locally low-involvement position.

Hypothesis 3

Local program involvement effects will be of greater magnitude in globally high-involving programs than in low-involving ones.

The fourth and fifth hypotheses concern the effects of message complexity on memory scores. Again, given previous research on message complexity (Watt & Welch, 1983; Watt & Krull, 1970) and the two assumptions about the effects of program context it is hypothesized that:

Hypothesis 4

Audio and video complex commercials will be less well remembered than audio and video simple commercials.

Hypothesis 5

The detrimental effects of audio and video complexity will be enhanced when commercials occur during globally high-involvement programs.

Given the assumption that viewers who are involved in a program will experience negative feelings when the program is interrupted for a commercial message, the expectation here is that the following conditions will lead to more negative feelings about watching the commercial and advertised product. Thus:

Hypothesis 6

Subjects will have more negative attitudes towards commercials and products advertised that are shown in a globally high-involvement program, than for commercials and products advertised in a globally low-involvement program.

Hypothesis 7

Subjects will have more negative attitudes towards commercials and products advertised in a locally high-involving position than when those are placed in a locally low-involvement position.

Hypothesis 8

Subjects will have more negative attitudes towards commercials and products placed in a locally high-involvement position of a globally high-involvement program than towards commercials placed in a locally low-involvement position within a globally high involvement program.

The eight hypotheses were tested in an experiment where subjects viewed 16 commercials varying in audio and video complexity, and embedded in four programs, two globally high-involving and two globally low-involving. Local program involvement was varied within each of the four programs.

Method

Selection of programming

Five television programs (Little House on the Prairie, A-Team, Inside Business, and Wild America) and one movie segment (Dressed to Kill) were edited down to 13-minute "programs." Thirty-three pretest subjects viewed one of two randomized orders of the programs and then answered four questions about each segment on a five-point scale ranging from strongly agree (1) to strongly disagree (5).

1. This program was thought provoking, it made me think what would happen next!
2. While viewing this segment, I felt some of the same things the characters were feeling at times.
3. I found this program segment very exciting.
4. I never got involved in this program as I do when I am watching a similar show on television. (Scale reversed)

On the basis of mean ratings on the four questions, four programs were selected for the experiment: high involving: Dressed to Kill ($\bar{X}$ = 2.0); Little House ($\bar{X}$ = 2.4) and low involving: Wild America ($\bar{X}$ = 3.4); Inside Business ($\bar{X}$ = 3.4).

Selection of Commercials

Sixteen commercials previously used in an experiment conducted by Thorson, Reeves, and Schleuder (1985) were included in the present study. The commercials represented the factorial combination of simple and complex audio information and two levels of visual complexity (simple visual/simple audio, simple visual/complex audio, complex visual/simple audio, and complex visual/complex audio). The selection method for these 16 message units was a two-step process.

First, 436 commercials were coded for video and audio structural complexity. Then, the eight commercials judged to be the most representative of the four complexity categories were presented in random order to 33 pretest subjects. Eighteen of the subjects only watched the 32 commercials, 19 only listened, and 16 both watched and listened. Subjects used magnitude scaling (Stevens, 1972) to estimate unit complexity on a 100-point scale. Before rating the 40 messages, subjects viewed or listened to anchors. A commercial depicting a man sitting in a chair and discussing at a rapid pace frozen vegetables was the video simple/audio complex anchor. Subjects were told that the video portion of this message unit would be rated a 10 and the audio portion a 100. Three other anchors representing simple/simple, complex/simple, and complex/complex ratings were shown. On the basis of the subjects' ratings, four message units per complexity level were selected.

Local Positioning of the Commercials

Guided by Bryant and Comisky's (1978) research, program segments were edited to provide a high-involvement position (pre-resolution) between the 10th and 12th minute, and a low-involvement position between the 5th and 6th minute (pre-climax).

Subjects

Forty-four female and 25 male undergraduates at a large midwestern university participated in the experiment. They were recruited from introduc-

tory mass communication courses and were given class credit for their participation.

Apparatus

A JVC U-Matic videotape player and a JVC 19" color television set were used to show the experimental materials.

Materials

The sixteen test commercials were embedded in the four program segments. In each segment, blocks of two commercials were embedded in locally high-and low-involvement positions. There were six counterbalanced orders of the four programs and the 16 commercials.

Design

A 2 (global program involvement) x 2 (local program involvement) x 2 (video complexity) x 2 (audio complexity) repeated measures design was used. Each subject viewed the two high and the two low involvement programs, as well as all 16 commercials.

Procedure

Subjects were randomly assigned to one of the program orders, and tested in groups of one to seven.

Before the start of the experiment, the subjects were told that they would participate in a television viewing study. To avoid sensitization, no mention was made that commercials were embedded in the programming. Subjects were told that they were going to watch four 15-minute television and movie segments. Subjects were instructed not to talk during the experiment and to pay normal attention to the segments. The experimenter remained in the testing room during viewing and testing.

After the 60-minute viewing session, the subjects were instructed to count backwards by sevens, starting at 5000. This was done to clear the subjects' short term memory of traces of the last block of commercials.

After about three minutes, subjects were asked to recall as many as possible of the commercials they had just seen. After the recall test each subject was given a recognition test on which they first had to indicate for which of twenty listed product categories (16 targeted and 4 foil commercials) they had seen a commercial. They were also asked to list a brand name for each recognized product category. Next, they were given an attitude questionnaire on which they had to indicate on a 10-point scale:

a. liking of advertised product;
b. liking of commercial;
c. attitude toward the advertised brand;
d. intention to buy the advertised brand.

Finally, there were questions about general television viewing behavior, as well as gender, age, and field of study. Subjects were also asked to indicate whether they had previously seen any of the commercials or program segments and as a manipulation check, to rate the global and local involvement levels of the programs themselves. Upon completion of the questionnaire, the subjects were thanked for their participation and asked not to discuss the experiment with other class members.

Results

Subject protocols were initially checked to determine whether any of the program segments or commercials had been seen before. Since having seen the commercials before would provide unfair memory advantage, any commercial reported as seen before by a subject was eliminated from his/her protocol. But since previously seen program segments were not reported by subjects as significantly differently involving than previously unseen segments, all program segments were maintained and "program seen before" was added as a variable in the analyses of variance.

Eliminating commercials that had been seen before lowered the number of subjects in analyses where the 16 commercials were divided into four complexity

levels and the four complexity levels into high and low local involvement positions (hence dropping the number of commercials in each category to two). The result was insufficient data to allow for simultaneous statistical examination of local and global involvement and commercial complexity. Instead, two separate analyses of variance (anovas) were performed. The first was a three-way test: Seen Segment x Global Involvement x Local Involvement (n = 61), subsequently referred to as the positioning anova. The second was a four-way test: Seen Segment x Global Involvement x Video Complexity x Audio Complexity (n = 37), referred to as the complexity anova.

A second manipulation-checking procedure concerned whether the subjects would verify the categorization of the program segments as high and low involving, and whether they would perceive the within-program involvement differences that had been derived by intuition. On a scale from 1 (low) to 10 (high), the two high involving programs were indeed rated higher than the low involving programs. The mean scores were:

Dressed to Kill	8.32
Little House on the Prairie	7.46
Wild America	4.87
Inside Business	4.03

T-Tests showed that both the high-involvement programs were rated significantly higher ($p < .05$) than both the low involvement programs.

The manipulation of local involvement, however, was only partially successful. While locally high and low positions within high involvement programs were rated as significantly different, there was no difference between the rating of the high and low involvement scenes in the globally low-involving programs. This result must be taken into consideration when interpreting the effects of local involvement.

Turning to the main analyses, recall and recognition of product and recall and recognition of both product and brand were analyzed separately, each

variable in both the complexity and the positioning anovas. Figure 1 shows the effects of global and local program involvement on recall of product and recall of both product and brand name. Figure 2 shows their effects on recognition (positioning anovas). Figures 3 and 4 show the effects of global involvement and video and audio complexity on product recall and both product and brand recall (complexity anovas). Figures 5 and 6 show the effects of global involvement and video and audio complexity on recognition of product category and both product category and brand name recognition (complexity anovas).

Global Involvement

Hypothesis 1 suggested that commercials located in globally high-involving programs would be less well recalled and recognized than those located in globally low-involving programs. Figure 1 shows this hypothesis was supported in the recall results. Product recall was higher in low-involvement programs ($\bar{x}$ = .481) than in high-involvement programs ($\bar{x}$ = .361). Brand recall in low involvement programs was higher ($\bar{x}$ = .427) than in high-involvement programs ($\bar{x}$ = .342).

Insert Figure 1 about here

Hypothesis 1 was also supported by the recognition results (Figure 2). High-involvement programs produced lower product ($\bar{x}$ = .688) and brand ($\bar{x}$ = .477) recognition than did low-involvement programs (product recognition $\bar{x}$ = .772; brand recognition $\bar{x}$ = .559).

Insert Figure 2 about here

Turning to the complexity analyses of variance, which had fewer degrees of freedom, the global involvement effect remained significant for product recall,

(Figure 3) and became marginally significant for brand recall (Figure 4). Global involvement did not produce significant main effects for product recognition or brand recognition and is therefore not shown in Figure 5.

Insert Figures 3, 4, and 5 about here

In general, then, there was ample support for the notion that commercials occurring in globally high-involving programs were less well remembered than when they occurred in globally lower-involving programs.

Local Involvement

Hypothesis 2 suggested that commercials placed in locally high-involving positions in programs would be less well remembered than commercials placed in locally low-involving positions. Hypothesis 3 suggested the local involvement effect would show an enhanced effect in globally high-involving programs. It should be kept in mind, of course, that the local involvement manipulation in globally low-involving programs remains questionable.

Figure 1 shows that neither product nor brand recall showed significant main effects of local program involvement. Figure 2 shows the same lack of effect for recognition. Thus, Hypothesis 2 was not supported.

Hypothesis 3 was supported by both product and brand recall in the global high-involvement condition. For the low-involvement condition, however, the relation was reversed: high local involvement produced higher recall than did low local involvement (the interaction between local and global involvement was significant for both recall measures).

Although the interaction of global and local involvement are counterintuitive, it was reflected almost exactly in the recognition measures (Figure 2). For product recognition, high local involvement produced high accuracy when glo-

bal involvement was low, and low accuracy when global involvement was high. The same result held for brand recognition, with the addition that local involvement had a marginally significant effect ($p<.10$). The direction of that effect was the opposite from that predicted by Hypothesis 3. Local high-involvement programming produced better brand recognition ($\bar{x} = .542$) than did local low-involvement programming ($\bar{x} = .495$).

The picture, then, for local involvement effects was inconsistent with that hypothesized, but the results were consistent across the four memory measures.

Having seen the program segments previously had only one effect on memory. Figure 1 shows that for product recall, programs seen interacted significantly with local involvement. For subjects who had seen the programming previously, high local involvement produced consistently better product recall than did low local involvement.

Audio and Video Complexity

Hypothesis 4 suggested that both audio and video complexity in commercials would result in weaker remembering. Hypothesis 5 suggested this result would be enhanced when the commercials occurred in globally high-involving programs.

As can be seen in Figures 3-6, audio complexity had a significant main effect on product and brand recall and product recognition. It did not have a significant effect on brand recognition. The directions of the effects were, however, generally contrary to the prediction. Audio complex commercials were better recalled than audio simple ones (Figures 3 and 4). But audio complex commercials were less accurately recognized than simple ones (Figure 5).

Also as shown in Figures 3-6, video complexity did not have a significant effect, except on product recognition (see Figure 5) where, as predicted, the video complex commercials produced poorer memory ($\bar{x} = .704$) than the simple ones ($\bar{x} = .820$). There was, however, no other significant indication that video complexity harmed memory.

Insert Figure 6 about here

Also unpredicted was the fact that audio and video complexity produced interactive effects on memory for all measures except brand recognition. As can be seen in the analyses of variance reported in Figures 3-5, the interactions were complex. In general, however, it appeared that when commercials were video simple, audio complexity had little effect. But when commercials were video complex, those that were also audio complex generally showed higher memory scores than those that were audio simple (see Figures 3, 4, and 6).

In general then, while commercial complexity had significant effects, they were more complicated than was hypothesized. Furthermore, complexity did not interact as hypothesized with global involvement. For product recall (Figure 3) and product recognition (Figure 5), there were no interactions of global involvement and complexity. For brand recall (Figure 4), involvement and audio complexity interacted marginally with having seen the programs before. For subjects who had seen the programs before, low involvement programs showed marked audio complexity effects. For brand recognition, audio complexity and global involvement interacted (Figure 6). In low-involvement programs, audio complexity had little effect on memory, but for high-involvement programs, audio complex commercials were better remembered than audio simple commercials. Thus, neither Hypothesis 4 nor Hypothesis 5 were supported.

Attitude Results

Subjects' attitudes about the commercials and the products they advertised were tested with two procedures. First, free recall protocols were content-analyzed for positive and negative opinion statements about commercials or products. Two observers content analyzed the protocols, producing an intercoder

reliability score of .80. Second, after memory testing, subjects were asked to indicate on a 10-point scale their:

- liking of each advertised product;
- liking of each commercial;
- attitude toward each advertised product;
- intention to buy each advertised product.

The free recall results are reported first.

Positive and Negative Opinions about Products and Commercials. For each of the four categories of opinion statement (positive opinion about the product or commercial; negative opinion about the product or commercial), two analyses of variance were performed. Similar to the analysis of the memory results, one analysis of variance was a three-way (Global Involvement x Local Involvement x Seen Programs), and the other was a four-way (Global Involvement x Video Complexity x Audio Complexity x Seen Programs).

Only one category (positive opinions about the commercial) showed significant anova effects at the .05 level. As shown in Figure 7, audio complexity and video complexity interacted. It appeared that video complexity affected positive attitudes towards the commercial only when the commercials are also audio simple. There was also a rather complicated three-way interaction between global involvement, video complexity, and having seen the program before. Video simple commercials were better liked when embedded in a globally low involving program. Finally, there was a main effect for audio complexity. Audio simple commercials were better liked ($\bar{x}$ = .169) than audio complex messages ($\bar{x}$ = .093).

Insert Figure 7 about here

Since the other categories did not reveal any significant findings, hypothesis 6 was not supported.

Because subjects frequently did not provide attitude ratings for some commercials, the second measurement (including a behavioral intention measure) had to be limited to a one-way analysis of variance, measuring the effect of global involvement. None of the analyses showed significant effects, and hence no support was evidenced for Hypotheses 6, 7, or 8.

Discussion

The purpose of this study was to investigate the effects of local and global involvement in program context and the effects of message complexity on the processing of commercials. Consistent with previous research, recall of commercials was lower when they occurred in globally high-involving programming. The effects on recognition of products and brands advertised were mixed. It seems likely that the recognition measures failed to show consistent effects of global program involvement because of the nature of the recognition task itself. The additional cues available in the task may have had such a strong effect on the accessing of memory for commercials that the program effects were masked.

In addition to program involvement effects at a global level, the present study showed that local high involvement also weakened memory for the commercials. Unfortunately, these results must be tempered by the fact that a manipulation check did not discriminate between locally high-and low-involving segments of low-involving programs. One possible reason is that the local involvement commercial placement based on intuition was not exact enough. A more precise measure, as for instance a minute-to-minute assessment of local involvement is recommended for future research.

Under the initial assumption that viewers would spend the time during commercials continuing to process high-involving programs, it was predicted that audio and video complex commercials would be remembered significantly less well than simple ones. Contrary to predictions, however, audio complex commercials

were recalled better than audio simple ones, and this effect was even stronger for commercials that were also video complex. This result argues against the notion that memory deficits shown in high-involvement programming result from viewers processing programming rather than commercials. If viewers recognize and respond to the need for more cognitive processing of audio complex commercials, they may lay down a stronger memory trace that is less interfered with by processing of subsequent programming. Such an interpretation lends credence to a retroactive inhibition (Bryant & Comisky, 1978) notion of program context effects. Under this model, processing high involvement materials subsequently to processing commercials damages otherwise normal memory traces of the commercials. Although follow-up studies are needed to verify the direction of commercial complexity effects, the present results cast significant doubt on the "residual processing of involving programs" idea.

In addition to recall and recognition scores, the effect of programming context was measured by attitudinal and purchase intention scores. Neither measure showed main effects for program involvement. Failing to find involvement effects on attitude scores is consistent with most previous studies. This consistent result argues against the second assumption made here, namely that viewers are more irritated by commercial interruptions during high-involvement programs. It is possible, instead, that a commercial break in a high-involving program provides a feeling of "relief" -- allowing the viewer to relax and enjoy a break. Or perhaps even more likely, given the lack of differences in attitudes between high-and low-involving programming, American viewers are so accustomed to commercial interruptions that there are no attitudinal shifts at all.

In general, this study has provided some new insights in the effects of local and global involvement in television programs, as well as in the effects of message complexity on processing commercials. Furthermore, this experiment

is valuable in that, unlike previous studies, the design involved sampling both programs and commercials. It counterbalanced the occurrence of the commercials in the programs, and finally, it verified subjects' involvement levels in the programs, rather than relying on experimenter intuitions about them.

Finally, it is important to consider what the implications of this study are for the advertising practitioner. Although the results are rather complex, it appears that if memory for message content is a major goal of the advertiser, audience considerations aside, commercials placed in a low-involving context seems advisable.

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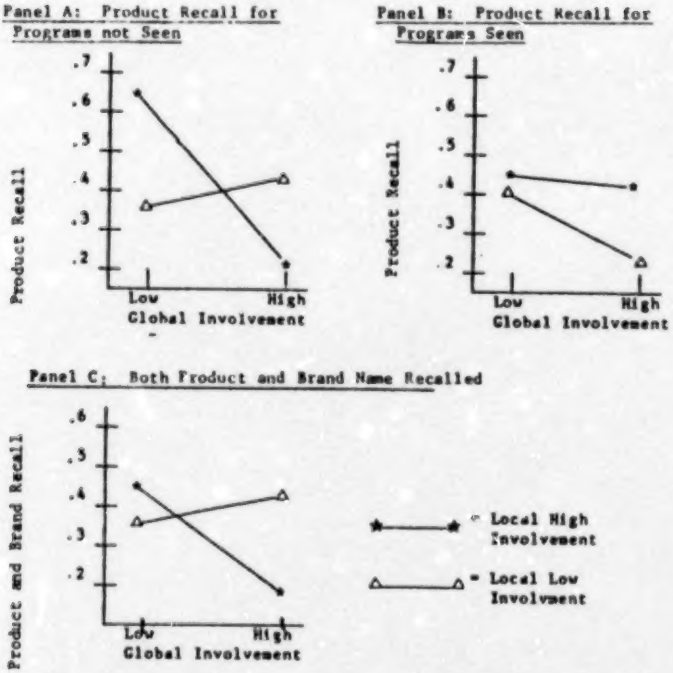
FIGURE 1

Effects of Global and Local Involvement
on Recall of Product Category and Brand Name



Positioning ANOVA Results

A) Product Recall

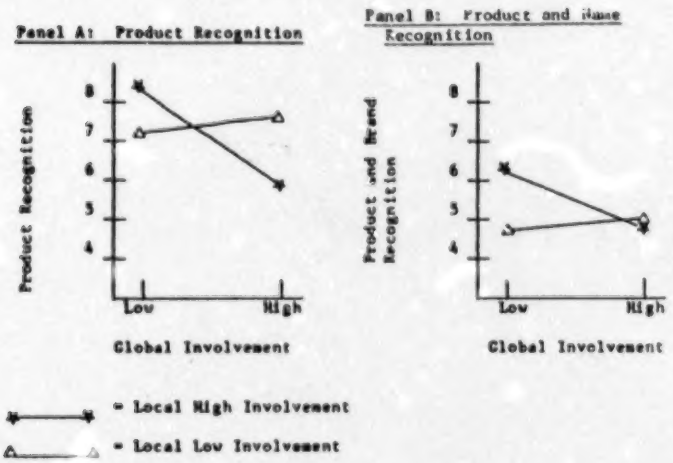
Global Involvement	$F(1,36) = 7.16$, $p<.01$
Local Involvement x Seen Programs	$F(1,36) = 4.84$, $p<.03$
Global x Local Involvement	$F(1,36) = 14.76$, $p<.001$

B) Product and Brand Recall

Global Involvement	$F(1,36) = 5.51$, $p<.03$
Global x Local Involvement	$F(1,36) = 16.92$, $p<.001$

FIGURE 2

Effects of Global and Local Involvement on Recognition of Product Category and Brand Name



Positioning ANOVA Results

A) **Product Recognized**

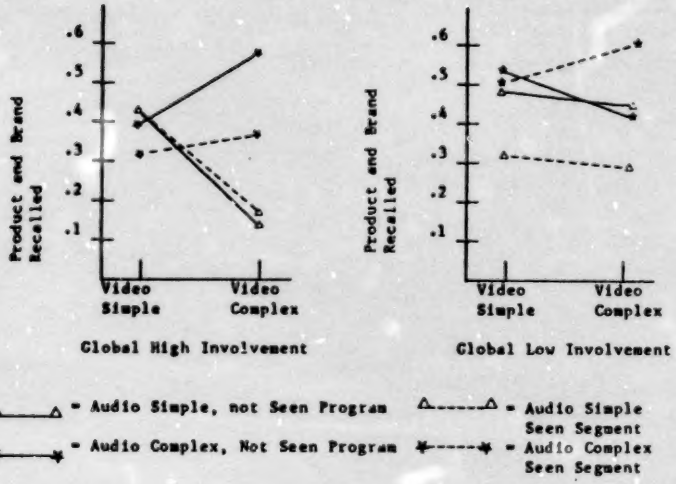
Global Involvement	$F(1,59) = 5.60$; $p<.02$
Global Involvement x Local Involvement	$F(1,59) = 16.81$; $p<.001$

B) **Product and Brandname Recognized**

Global Involvement	$F(1,59) = 5.81$; $p<.02$
Local Involvement	$F(1,59) = 2.81$; $p<.10$
Global Involvement x Local Involvement	$F(1,59) = 6.20$; $p<.02$

FIGURE 4

Effects of Global Involvement and Commercial Complexity on Recall of Product and Brand Name



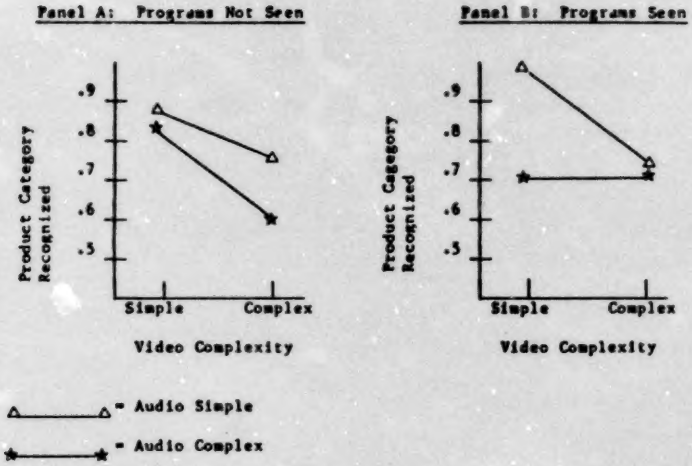
Complexity ANOVA Results

Product and Brandname Recalled

Global Involvement	$F(1,27) = 3.51$; $p<.07$
Audio Complexity	$F(1,27) = 3.50$; $p<.07$
Global Involvement x Audio Complexity x Seen Segment	$F(1,27) = 3.65$; $p<.07$
Video Complexity x Audio Complexity	$F(1,27) = 5.04$; $p<.03$

FIGURE 5

Effects of Commercial Complexity on Recognition of Product Category



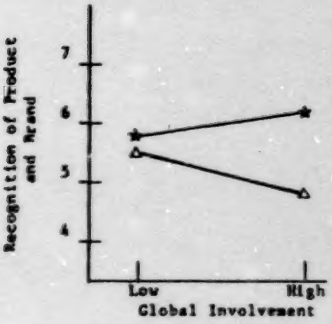
Complexity ANOVA Results

Product Recognized

Audio Complexity	$F(1,35) = 12.88$; $p<.01$
Video Complexity	$F(1,35) = 12.43$; $p<.01$
Audio x Video Complexity x Seen Segment	$F(1,35) = 6.83$; $p<.01$

FIGURE 6

Effects of Global Involvement and Commercial Complexity
on Recognition of Product and Brand Name



★——★ = Audio Complex

△——△ = Audio Simple

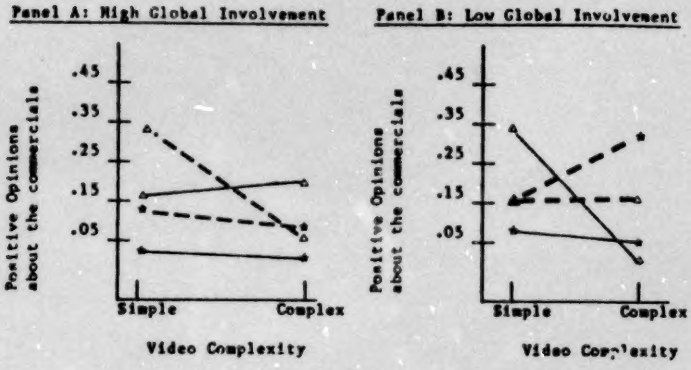
Complexity ANOVA Results

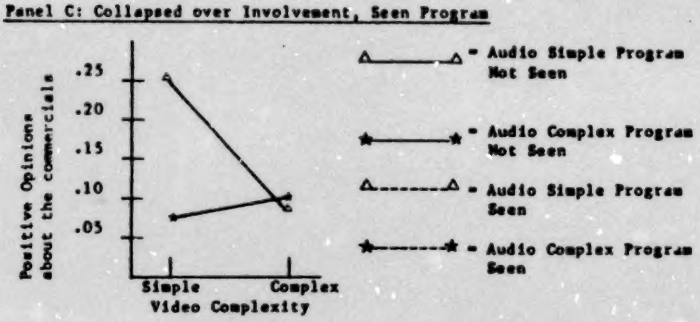
Product and Brandname Recognized

Global Involvement x Audio Complexity $F(1,35) = 4.20$; $p<.05$

FIGURE 7

Effects of Global Involvement and Commercial Complexity on Positive Opinions about the Commercial



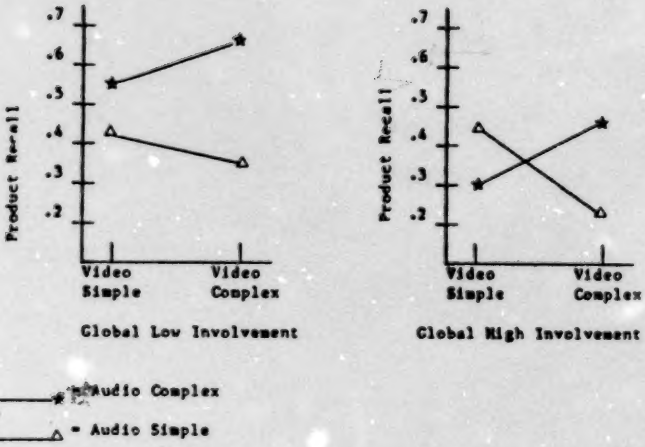


Complexity ANOVA Results

Global Involvement x Video Complexity x Seen Program	$F(1,35) = 9.93$; $p<.01$
Audio Complexity x Video Complexity	$F(1,35) = 9.27$; $p<.01$
Audio Complexity	$F(1,35) = 3.81$; $p<.05$

FIGURE 3

Effects of Global Involvement and Commercial Complexity on Recall of Product Category



Complexity ANOVA Results

Product Recall

Global Involvement	$F(1,27) = 7.70$; $p<.01$
Audio Complexity	$F(1,27) = 7.16$; $p<.01$
Video Complexity x Audio Complexity	$F(1.27) = 8.27$; $p<.01$